

### Examiner's Amendment

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

**IN THE TITLE:**

The title has been changed to:

--COMPUTER SYSTEM PROGRAM AND METHOD TO CHARACTERIZE EACH OF A PLURALITY OF OBJECTS USED AT RUNTIME TO DETERMINE A LOWEST COST PROPERTY AMONG A PLURALITY OF POTENTIAL ALTERNATIVE PROPERTIES FOR EACH OF SAID OBJECTS MINIMIZING TOTAL COST OF INTERACTION AMONG COMPONENTS DURING PROGRAM EXECUTION--

### Allowable Subject Matter

2. The following is an examiner's statement of reasons for allowance: claims 6-22 are considered allowable since when reading the claims in light of the specification, as per MPEP §2111.01 or *Toro Co. v. White Consolidated Industries Inc.*, 199 F.3d 1295, 1301, 53 USPQ2d 1065, 1069 (Fed. Cir. 1999), none of the references of record alone or in combination disclose or

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suggest the combination of limitations specified in the independent claims, specifically a computer system with a computer program that, when being loaded and executed, controls the computer system such that it carries out a method comprising steps of: a) instrumenting an initial run of said computer program to determine characterization information about each of a plurality of objects to be used at runtime to recognize groups of objects efficiently, as the objects are created, in repeated runs of an object-oriented programs; b) determining a lowest cost property among a plurality of potential alternative properties for one of said objects; c ) determining a correlation between a lowest cost property and said characterization information associated with the one object; d ) expressing the correlation as an allocation strategy; and e ) implementing said allocation strategy to select among the alternative properties for an object subsequently created during the at least partial run of said program based upon characterization information about the subsequently created object; and f) producing a subsequent set of objects comprising the characterization information selected in step e); wherein the determining of the lowest cost property in step (b) is carried out by minimizing total cost of interaction among components during the initial run of said program as essentially

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disclosed in independent claims 6, 11, 12, and 19 of the instant application (as defined at e.g., pg. 4-13 of the specification of the instant application).

3. A practical application for the invention is disclosed on page 1: transform "programs so that they run more quickly, but produce the same results...".

4. The claimed computer readable medium has been interpreted as being a tangible computer memory including "nonvolatile memory, such as ROM, Flash memory, Disk drive memory, CD-ROM, and other permanent storage" (as disclosed at page 14).

The Prior art of reference *Clawson* (US Patent No. 6,112,304) discloses a method of characterizing objects generated during at least a partial run of a program, each object being characterized by a plurality of alternative properties which can be selected, said method comprising: a) instrumenting said at least partial run of said program to determine characterization information about each of said objects; b) determining a desirable property for said objects; c) determining a correlation between said desirable property and said characterization information for each of said objects; d)

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using said correlation to select an property for an object subsequently created during an at least partial run of said program based upon characterization information about the subsequently created object.

*Clawson* does not teach computer system with a computer program that, when being loaded and executed, controls the computer system such that it carries out a method comprising steps of: a) instrumenting an initial run of said computer program to determine characterization information about each of a plurality of objects to be used at runtime to recognize groups of objects efficiently, as the objects are created, in repeated runs of an object-oriented programs; b) determining a lowest cost property among a plurality of potential alternative properties for one of said objects; c ) determining a correlation between a lowest cost property and said characterization information associated with the one object; d ) expressing the correlation as an allocation strategy; and e ) implementing said allocation strategy to select among the alternative properties for an object subsequently created during the at least partial run of said program based upon characterization information about the subsequently created object; and f) producing a subsequent set of objects comprising the characterization information selected in step e); wherein

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the determining of the lowest cost property in step (b) is carried out by minimizing total cost of interaction among components during the initial run of said program as specified in the independent claims of the instant application.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

/Nathan H. Brown, Jr./

Examiner, Art Unit 2129

/David R Vincent/

Supervisory Patent Examiner, Art Unit 2129